AMENDMENTS TO THE DRAWINGS

A replacement drawing sheet for FIGURE 2 is attached herewith. In this regard, FIGURE 2 has been revised to properly identify the high frequency receiver 180 and correctly specify the flow of information in a way that is consistent with the description in the specification.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

REMARKS

Introduction

Claims 17-32 are pending in the present application. In an August 27, 2009, Office Action (hereinafter "Office Action"), Claims 17-20, 22-25, 29, 31, and 32 were rejected under 35 U.S.C. § 102(b) as being anticipated by European Patent Application Publication No. EP 1 209 615, to Claudio Salvador (hereinafter "Salvador"). Claim 21 was rejected under 35 U.S.C. § 103(a) as being obvious over Salvador in view of U.S. Patent No. 4,167,681, to Wolkstein et al. (hereinafter "Wolkstein"). Claim 26 was rejected under 35 U.S.C. § 103(a) as being obvious over Salvador in view of U.S. Patent Application Publication No. 2002/0149484, to Carrender (hereinafter "Carrender"). Claims 27 and 28 were rejected under 35 U.S.C. § 103(a) as being obvious over Salvador, Carrender, and in further view of U.S. Patent No. 6,107,910, to Nysen (hereinafter "Nysen"). Claim 30 was rejected under 35 U.S.C. § 103(a) as being obvious over Salvador in view of Chinese Patent Publication No. 2304947, to Wei (hereinafter "Wei").

Claims 17-32 have been amended to further clarify the claimed subject matter over the cited references and to advance prosecution of the present application. Claims 33-36 are new. For at least the following reasons, applicant respectfully requests reconsideration and allowance of the pending claims.

Amendment To the Specification and Drawings

The Abstract of the Disclosure was objected to because it was more than 150 words long. Accordingly, applicant has amended the Abstract to be within the required length as required by M.P.E.P. § 608.01(b).

The Office Action further objected to the drawings as containing certain typographical errors that were not consistent with the disclosure in the specification. Accordingly, a

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

replacement drawing sheet for FIGURE 2 is attached herewith. In this regard, FIGURE 2 has been revised to properly identify the high frequency receiver 180 and correctly specify the flow of information in a way that is consistent with the description in the specification. No new matter has been added. Withdrawal of the objections is respectfully requested.

Rejections of Claims 17-32

Claim 17

Claim 17 was rejected under 35 U.S.C. § 102(b) as being anticipated by Salvador. As amended, independent Claim 17 recites:

> 17. A reader interfacing device, configured to:
>
> establish a first communication path with a reader configured to emit and receive interrogating radiation at a first radiation frequency; and
>
> establish a second communication path with a remote tag or smart label configured to be interrogated using radiation of a second frequency different from the first frequency by at least an order of magnitude;
>
> wherein the reader interfacing device is further configured to receive the interrogating radiation at the first radiation frequency from the reader, translate the received interrogating radiation into an output signal, and radiate the output signal at the second radiation frequency to the remote tag or smart label.

Applicant respectfully disagrees with the grounds for the rejection recited in the pending Office Action. However, in order to advance prosecution of the present application, applicant has made clarifying amendments to independent Claim 17 that further distinguishes the claim from the cited reference. Applicant submits that Salvador fails to disclose or suggest every recitation of amended Claim 17. In particular, Claim 17 recites a reader interface device "configured to receive the interrogating radiation at the first radiation frequency from the reader, translate the received interrogating radiation into an output signal, and radiate the output signal at the second radiation frequency to the remote tag or smart label."

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

The Office Action references Salvador at ¶ [0017] in support of the proposition that the cited reference discloses a reader interfacing device. See Office Action at page 3. However, the referenced section of Salvador purportedly discloses a transponder system in which an "interrogating device BOA and the at least one responding device TAG are provided with means for communicating through two distinct channels (L1, L2; Figure 1) . . . ." See Salvador at ¶ [0017].

The cited sections of Salvador and the reference taken as a whole fails to disclose or suggest a "reader interfacing device" as recited in Claim 17. Instead, Salvador purportedly discloses an interrogating device that communicates directly with "at least one responding device TAG" using "two distinct channels." The referenced section of Salvador and the corresponding figures clearly indicate that communications between an interrogator and the responding device TAG utilize a dual band transponder system in which "two distinct transmission channels, one channel for the activation, by the interrogator device (BOA), of a responding device (TAG) . . . the other channel, bi-directional for data exchanging between the interrogating device (BOA) and a responding device (TAG) . . . ." See Salvador at Abstract. In this regard, Figure 2 of Salvador clearly illustrates that the interrogator device BOA and responding device TAG communicate directly over two distinct transmitting channels. Applicant submits that using multiple communication channels to directly communicate between an interrogator and a responding device TAG is not equivalent to a reader interfacing device "configured to receive the interrogating radiation at the first radiation frequency from the reader, translate the received interrogating radiation into an output signal, and radiate the output signal at the second radiation frequency to the remote tag or smart label" as recited in Claim 17.

The aspect of Salvador that purportedly discloses creation of direct communication channels teaches away from the recited elements in Claim 17. In particular, Salvador teaches that both the interrogating device BOA and responding device TAG have two antennae: one for

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

exchanging microwave radiation and a second for exchanging lower frequency radio signals. This aspect of Salvador is clearly reflected in the reference, which states:

> [0019] Two antennae (B1, B2) belonging to the interrogating device BOA and two antennae (T1, T2) belonging to the responding device TAG are corresponding to the two transmitting channels (L1, L2).

(Salvador at ¶ [0019].) Accordingly, the interrogator BOA and responding device TAG described in Salvador must have at least "two antennae" which correspond to "the two transmitting channels (L1, L2)." This aspect of Salvador is further reflected in the reference, which states:

> [0021] The microwave activation channel L1 is a microwave signal emitted by an oscillator OM (belonging to the interrogating device BOA) by means of the antenna B1 belonging to the interrogating device BOA and received by a microwave detector RL (belonging to the responding device TAG) by means of the antenna T1 belonging to the responding device TAG.

(Salvador at ¶ [0021].) Since multiple antennae on each device are used to communicate over the separate communication channels, Salvador teaches away from a reader interfacing device configured to "translate the received interrogating radiation" in order to perform data exchange between the reader and the remote tag or smart label. In contrast, Claim 17 recites a reader interfacing device configured to "translate the received interrogating radiation into an output signal, and radiate the output signal at the second radiation frequency to the remote tag or smart label." This recited subject matter is in stark contrast to the dual band transponder system of Salvador in which an interrogating device and responding device TAG are each required to have at least two antennae for transmitting over separate communication channels.

Under 35 U.S.C. § 102, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Applicant respectfully submits that Salvador fails to expressly or inherently teach, disclose, or

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

suggest certain elements of Claim 17, as described above. Accordingly, applicant respectfully requests withdrawal of the pending rejection under 35 U.S.C. § 102(b) with regard to Claim 17, and allowance of this claim.

Claims 18-20, 22-25, 29, and 31

Claims 18-20, 22-25, 29, and 31 were rejected under 35 U.S.C. § 102 as being anticipated by Salvador. Claims 18-20, 22-25, 29, and 31 depend from independent Claim 17. As discussed above, the applied reference fails to teach or suggest all of the recited elements in Claim 17. Accordingly, for the above-described reasons, dependent Claims 18-20, 22-25, 29, and 31 are also allowable over the cited reference. Additionally, these claims are not anticipated by Salvador for additional reasons, some of which are discussed in further detail below.

As amended, Claim 18 recites, "a power converter configured to convert the interrogating radiation received from the reader and thereby generate power supply potentials for powering the reader interfacing device, wherein the generated power supply potentials are supplemental to power provided from an external source." The Office Action asserts that Salvador discloses a power converter for converting interrogating radiation and cites Salvador at ¶¶ [0042] and [0045] in support of that proposition. However, the cited sections of Salvador and the reference taken as a whole indicates that Salvador purportedly discloses using detection of a continuous voltage to trigger "the passage of the responding device TAG to the activation status." Salvador at ¶ [0045]. Accordingly, Salvador does not disclose a power converter configured to convert the interrogating radiation "received from the reader and thereby generate power supply potentials for powering the reader interfacing device, wherein the generated power supply potentials are supplemental to power provided from an external source." The receiving device TAG as disclosed in Salvador is simply not configured to use an external source, let alone be powered using interrogating radiation that is supplemental to the power provided from an external source.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Accordingly, for at least these reasons, Salvador also fails to teach or suggest these additional elements recited in Claim 18.

Regarding Claim 19, this claim recites, "wherein the reader interfacing device is further configured to be mutually magnetically coupled to the reader for receiving the interrogating radiation therefrom and for providing a modulated load thereto for communicating back to the reader." The Office Action cites Salvador at ¶¶ [0003] and [0004] as reading on the elements recited in Claim 19. The cited sections of Salvador purportedly disclose "an inductive coupling between the interrogating device BOA and the responding devices TAG." Applicant respectfully submits that an inductive coupling between an interrogating device BOA and a responding device TAG is not equivalent to elements recited in Claim 19. In particular, Claim 19 includes the element of "providing a modulated load thereto for communicating back to the reader." Applicant is unable to find any disclosure in Salvador to a magnetic coupling used to communicate "a modulated load" from a reader interfacing device "back to the reader." Accordingly, for at least these reasons, Salvador also fails to teach these additional elements recited in Claim 19.

Claim 22 recites "wherein the second frequency is in a range of 300 MHz to 90 GHz." The Office Action references Salvador at ¶ [0018], which discloses a "microwave transmitting channel" and takes Official Notice that "microwave frequencies is well known in the art and are typically in the range of 300 MHz to 300 GHz." See Office Action at page 5. However, under 35 U.S.C. § 102, a claim is only anticipated if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The Office Action effectively acknowledges that Salvador does not disclose a "second frequency . . . in a range of 300 MHz to 90 GHz" but improperly takes Official Notice. With respect to Official Notice, the M.P.E.P. states that "such rejection should be judiciously applied" (see M.P.E.P. at § 2144.03). Applicant notes that contrary to the caution advised by the M.P.E.P., in this case, the Office

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Action liberally applies Official Notice within the context of a § 102 anticipation rejection. Moreover, Official Notice is only appropriate when the fact asserted as common knowledge is "capable of such instant and unquestionable demonstration as to defy dispute." *In re Knapp Monarch Co.*, 296 F.2d 230 (C.C.P.A. 1961); *see* M.P.E.P. § 2144.03. But it is never appropriate to rely on common knowledge in the art without evidentiary support in the record. *In re Zurko*, 258 F.3d 1379, 1385 (Fed. Cir. 2001); *see* M.P.E.P. § 2144.03A. Applicant submits that "wherein the second frequency is in a range of 300 MHz to 90 GHz" is not anticipated by the cited reference as common knowledge in the art, nor is the assertion made in the Official Notice supported in the record. Indeed, even assuming *arguendo* that the assertion made in the Office Action is accurate, Claim 22 recites a narrower range of frequencies that is not all "microwave frequencies," as purportedly disclosed in Salvador. The legal standard for applying Official Notice under M.P.E.P. § 2144.03 is rigorous, and applicant respectfully submits that the present application of Official Notice falls short of meeting this standard and that a *prima facie* case of anticipation has not been established. Accordingly, applicant respectfully requests withdrawal of the 35 U.S.C. § 102 rejection of Claim 22 and allowance of this claim.

Claim 24 recites, "wherein the second frequency is substantially in a range of 2 GHz to 3 GHz." The Office Action references Salvador at ¶ [0024], which discloses a "microwave signal" and takes Official Notice that "microwave frequencies is well known in the art and are typically in the range of 300 MHz to 300 GHz." See Office Action at pp. 5-6. As set forth above, the legal standard for applying Official Notice under M.P.E.P. § 2144.03 is rigorous. For the same reasons described above with regard to Claim 22, the present application of Official Notice falls short of meeting this standard such that a *prima facie* case of anticipation has not been established with regard to Claim 24. Accordingly, applicant respectfully requests withdrawal of the 35 U.S.C. § 102(e) rejection of Claim 24 and allowance of this claim.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS[PLLC]
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Claim 25 has the additional recitation of a "translator configured to convert between a modulation format used by the reader for modulating information onto the interrogating radiation to be received by the reader interfacing device and a modulation format used by the remote tag or smart label for communicating to and from the reader interfacing device." The Office Action references Salvador at ¶ [0022], lines 46-50, as disclosing the element recited in Claim 25. The cited sections of Salvador purportedly disclose an interrogating device in which an activation signal "may be variously modulated so as to avoid accidental activation by isofrequential disturbing sources or to create an information carrier." Applicant respectfully submits that an "activation signal" that is "variously modulated" is not equivalent to the elements recited in Claim 25. In particular, Claim 25 includes "a translator configured to convert between a modulation format used by the reader for modulating information" into a "modulation format used by the remote tag or smart label . . . ." The disclosure of "variously modulating" an activation signal is not equivalent to converting between a modulation format of Claim 25. Accordingly, applicant respectfully requests withdrawal of the rejection of Claim 25 for this additional reason.

Claims 21, 26-28, and 30

Claims 21, 26-28, and 30 were rejected under Salvador and various combinations of Wolkstein, Carrender, and Nysen. Claims 21, 26-28, and 30 depend on independent Claim 17. As discussed above, Salvador fails to teach or suggest certain elements of independent Claim 17 as alleged in the Office Action. Accordingly, Claims 21, 26-28, and 30 are also allowable over the cited references based at least on their dependency from Claim 17. Additionally, these claims are patentable over the cited references for the additional claim elements that they recite.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Claim 32

Claim 32 was rejected under 35 U.S.C. § 102(b) as being anticipated by Salvador. As amended, independent Claim 32 recites:

> 32. A system, comprising:
>
> a reader interfacing device;
>
> a reader configured to emit and receive interrogating radiation at a first radiation frequency; and
>
> a remote tag or smart label configured to receive radiation at a second frequency different from the first frequency by at least an order of magnitude;
>
> wherein the reader is further configured to communicate through the reader interfacing device to the remote tag or smart label, and wherein the remote tag or smart label is configured to generate a return signal at the first radiation frequency that is translated into an output signal by the reader interfacing device and communicated to the reader as radiation at the second radiation frequency.

As reflected above, Claim 32 has been amended to recite similar elements to those found in Claim 17, particularly regarding a remote tag or smart label "configured to generate a return signal at the first radiation frequency that is translated into an output signal by the reader interfacing device and communicated to the reader as radiation at the second radiation frequency." However, in this instance, the "reader interfacing device" translates a signal received from the remote tag or smart label that is "communicated to the reader." As set forth above with regard to Claim 17, Salvador purportedly discloses a dual band transponder system in which separate communication channels are used to exchange data directly between an interrogator and a responding device TAG. Accordingly, Salvador does not perform a translation in which a return signal "is translated into an output signal by the reader interfacing device and communicated to the reader as radiation at the second radiation frequency." Accordingly, applicant requests that the 35 U.S.C. § 102 rejection of Claim 32 be withdrawn and this claim allowed.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

New Claims 33-36

Claims 33 and 34 include elements that mirror Claims 19 and 25 and are embodied as system claims. Accordingly, for the same reasons discussed above with regard to Claims 19 and 25, applicant asserts that these claims are patentable over the cited references. Claim 35 includes elements that mirror Claim 17 and is embodied as a means-plus-function claim. Accordingly, for the same reasons discussed above with regard to Claim 17, applicant asserts that Claim 35 is patentable over the cited references. Claim 36 includes elements that mirror Claim 18 and is embodied as a means-plus-function claim. Accordingly, for the same reasons discussed above with regard to Claim 18, applicant asserts that Claim 36 is patentable over the cited references.

CONCLUSION

Based on the above-referenced arguments, applicant respectfully submits that all pending claims of the present application are allowable over the cited and applied references, either alone or in combination. Because the cited and applied references, either alone or in combination, fail to disclose, teach, or suggest elements of the pending claims as alleged in the Office Action, applicant respectfully requests withdrawal of the rejection of the claims and allowance of the present application. If any questions remain, applicant requests that the Examiner contact the undersigned at the telephone number listed below.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS[PLLC]

Clint J. Feekes
Registration No. 51,670
Direct Dial No. 206.695.1633

CJF:lal

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS[PLLC]
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100